

DRILL HOLES

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PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 924 (EMMORTON RD.) AND ABINGDON RD./SINGER RD. IN HARFORD COUNTY. THE WORK IS NECESSITATED BY THE WIDENING OF THE ABINGDON RD. AND SINGER RD. MD 924 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THE INTERSECTION CURRENTLY OPERATES IN A NEMA EIGHT-PHASE, FULLY-ACTUATED MODE WITH EXCLUSIVE-PERMISSIVE LEFT TURN PHASES FOR ALL APPROACHES OF THE INTERSECTION. THIS OPERATION WILL NOT CHANGE

CONTROLLER REQUIREMENTS

THE EXISTING EIGHT-PHASE, FULLY-ACTUATED CONTROLLER HOUSED IN A POLE MOUNTED CABINET WILL BE USED.

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE FURNISHED BY THE SHA AND INSTALLED BY THE CONTRACTOR

QUANTITY	DESCRIPTION
NONE	

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR. ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO THE OFFICE OF TRAFFIC AND SAFETY FOR APPROVAL PRIOR TO INSTALLATION.

QUANTITY	DESCRIPTION
LS	MAINTENANCE OF TRAFFIC
1 CY	TEST PIT EXCAVATION
80 LF	24 IN. HEAT APPLIED WHITE THERMOPLASTIC PAVEMENT MARKINGS
9 EA	HEAT APPLIED WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING ARROW
20 EA	12 IN. L.E.D. SIGNAL HEAD SECTION
6 EA	8 IN. L.E.D. SIGNAL HEAD SECTION
3 CY	CONCRETE FOUNDATION FOR SIGNAL
1 EA	27 FT. MAST ARM POLE & TWIN 50 FT. MAST ARMS
1 EA	ELECTRICAL HANDHOLE
150 LF	4 IN. SCHEDULE 80 RIGID PVC ELECTRICAL CONDUIT- SLOTTED
1 LS	REMOVE AND DISPOSE MATERIAL AND EQUIPMENT
2 EA	VIDEO DETECTION CAMERA AND CABLE
56 LF	WOOD SIGN SUPPORTS 4 IN. X 4 IN.
100 LF	WOOD SIGN SUPPORTS 4 IN. X 6 IN.
40 LF	ELECTRICAL CABLE 5 - CONDUCTOR (NO. 14 A.W.G.)
590 LF	ELECTRICAL CABLE 7 - CONDUCTOR (NO. 14 A.W.G.)
130 LF	ELECTRICAL CABLE 2 - CONDUCTOR (NO. 12 A.W.G.)
85 LF	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
1 EA	3/4 IN. X 10 FT. GROUND ROD
1 EA	D-3(1) (VAR X 16") DUAL FACE SIGN - MAST ARM MOUNT
1 EA	SHIELD ASSEMBLY (48" X 72") - POLE MOUNT
1 EA	R3-SL (30" X 36") SIGN - MAST ARM MOUNT
4 EA	OM1-3 (18" X 18") SIGN - GROUND MOUNT
2 EA	R3-7(2)R (30" X 42") SIGN - MAST ARM MOUNT
4 EA	R3-9B (30" X 36") SIGN - GROUND MOUNT
140 LF	OPTICOM DETECTOR CABLE, 4 - CONDUCTOR
1 EA	OPTICOM DETECTOR EYE W/MAST ARM MOUNTED HARDWARE, 721
1 EA	NON-INVASIVE MICRO-LOOP PROBE AND LEAD-IN
1 EA	15 FT. LIGHTING ARM WITH 250 WATT HPSV LUMINAIRE

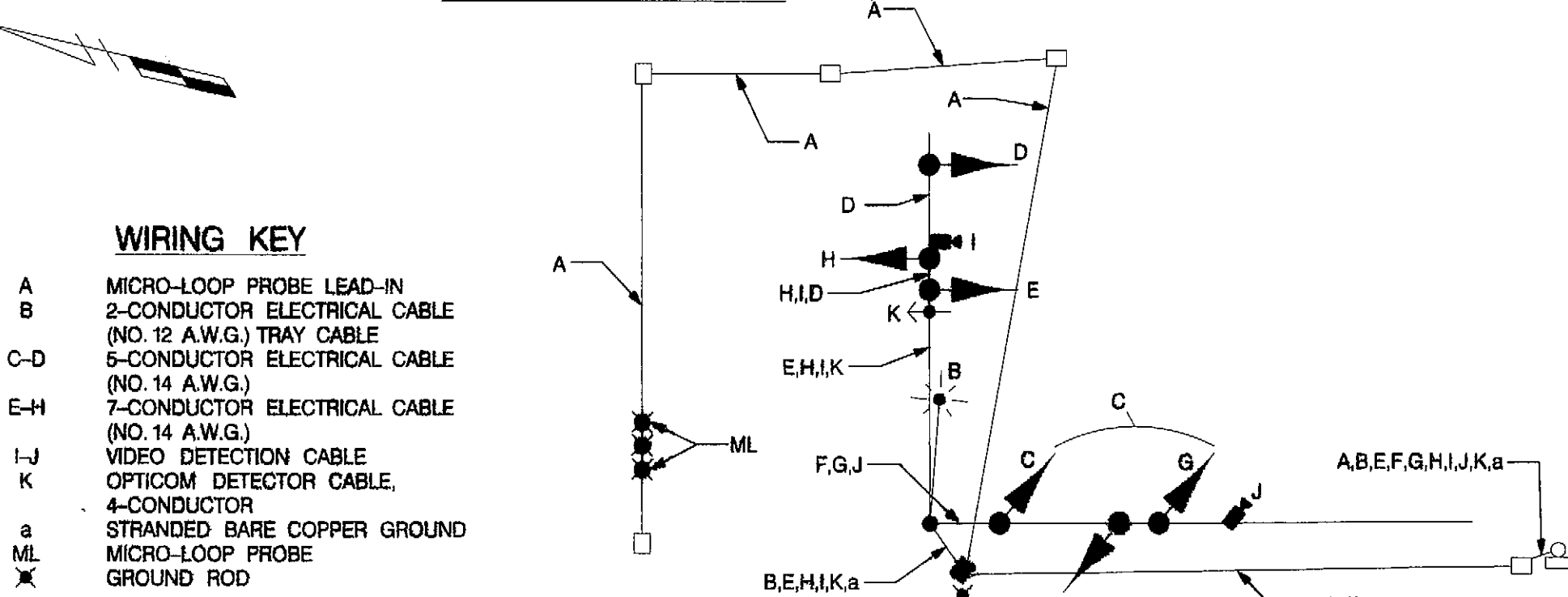
EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076. THE CONTRACTOR SHALL NOTIFY THE SHA AT (410) 787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.

QUANTITY	DESCRIPTION
NONE	

ALL SIGNAL EQUIPMENT TO BE REMOVED AND NOT RETURNED TO THE SHA SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

WIRING DIAGRAM



PHASE CHART

	1	2	3	4	5	6	7	8	9	10	11	12
PHASE 1 & 5	R	G	R	G	R	R	R	R	R	R	R	R
1 & 5 CHANGE	G	G	R	R	R	R	R	R	R	R	R	R
PHASE 1 & 6	G	G	G	R	R	R	R	R	R	R	R	R
1 CHANGE	G	G	G	R	R	R	R	R	R	R	R	R
PHASE 2 & 5	R	R	R	G	G	R	R	R	R	R	R	R
5 CHANGE	R	R	R	G	G	R	R	R	R	R	R	R
PHASE 2 & 6	G	G	G	G	G	R	R	R	R	R	R	R
2 & 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	R	R	R	R
PHASE 3 & 7	R	R	R	R	R	R	G	G	R	R	R	R
3 & 7 CHANGE	PHASE 3 & 7 MAY CHANGE TO PHASE 3 & 8, 4 & 7, OR 4 & 8											
PHASE 3 & 8	R	R	R	R	R	G	G	R	R	R	R	R
3 CHANGE	R	R	R	R	R	G	G	R	R	R	R	R
PHASE 4 & 7	R	R	R	R	R	R	R	R	G	G	R	R
7 CHANGE	R	R	R	R	R	R	R	R	G	G	R	R
PHASE 4 & 8	R	R	R	R	R	R	G	G	G	G	R	R
4 & 8 CHANGE	R	R	R	R	R	R	Y	Y	Y	Y	Y	Y
FLASHING OPERATION	FLY	FLY	FLY	FLY	FLY	FLY	FLY	FLY	FLY	FLY	FLY	FLY
EMERGENCY PRE-EMPTION 'A'	G	G	G	R	R	R	R	R	R	R	R	R
PRE-EMPTION CHANGE	G	G	G	R	R	R	R	R	R	R	R	R
EMERGENCY PRE-EMPTION 'B'	R	R	R	G	G	R	R	R	R	R	R	R
PRE-EMPTION CHANGE	R	R	R	G	G	R	R	R	R	R	R	R
EMERGENCY PRE-EMPTION 'C'	R	R	R	R	R	R	R	R	R	G	G	R
PRE-EMPTION CHANGE	R	R	R	R	R	R	R	R	R	G	G	R

CONTACT PERSONS FOR DISTRICT 4 ARE AS FOLLOWS:

MRS. ERIN KUHN
ASSISTANT DISTRICT ENGINEER - TRAFFIC
(410) 229-2380

MR. ANDRE FUTRELL
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
(410) 229-2361

MR. MICHAEL PASQUARIELLO
UTILITY ENGINEER
(410) 229-2341

CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY

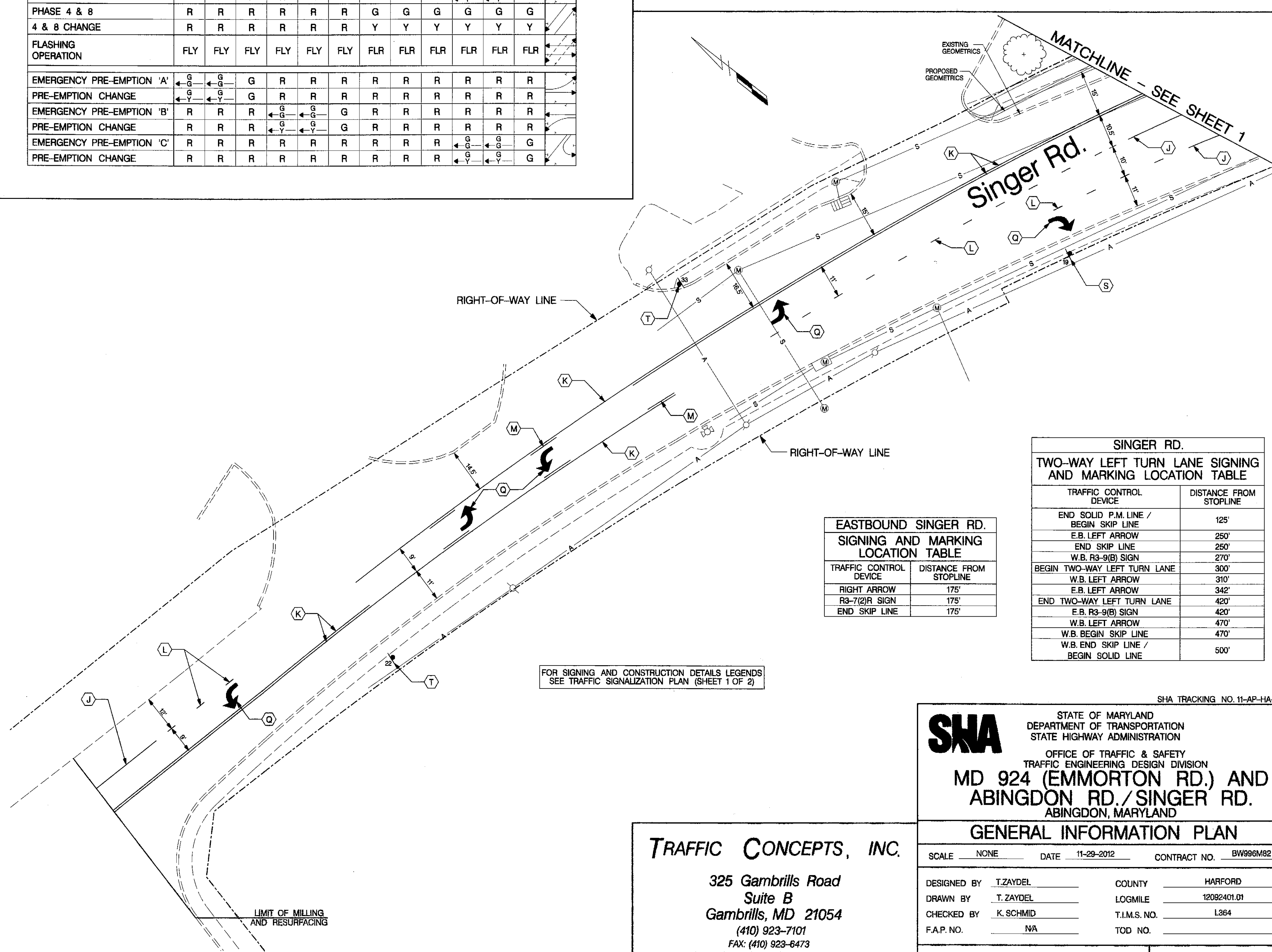
MR. AVIJIT MAJI
CHIEF, TRAFFIC OPERATIONS
(410) 787-7630

MR. EUGENE BAILEY
TEAM LEADER SIGN OPERATIONS
(410) 787-7676

MR. ROBERT SNYDER
ASSISTANT DIVISION CHIEF,
TRAFFIC OPERATIONS
(410) 787-7631

MR. MIKE STOOKER
SUPPLY OFFICE
SIGNAL SHOP WAREHOUSE
(410) 787-7668

MR. ED RODENHIZER
CHIEF - SIGNAL OPERATIONS SECTION
(410) 787-7652



EASTBOUND SINGER RD. SIGNING AND MARKING LOCATION TABLE	
TRAFFIC CONTROL DEVICE	DISTANCE FROM STOPLINE
RIGHT ARROW	175'
R3-7(2)R SIGN	175'
END SKIP LINE	175'

SINGER RD. TWO-WAY LEFT TURN LANE SIGNING AND MARKING LOCATION TABLE	
TRAFFIC CONTROL DEVICE	DISTANCE FROM STOPLINE
END SOLID P.M. LINE / BEGIN SKIP LINE	125'
E.B. LEFT ARROW	250'
END SKIP LINE	250'
W.B. R3-9(B) SIGN	270'
BEGIN TWO-WAY LEFT TURN LANE	300'
W.B. LEFT ARROW	310'
E.B. LEFT ARROW	342'
END TWO-WAY LEFT TURN LANE	420'
E.B. R3-9(B) SIGN	420'
W.B. LEFT ARROW	470'
W.B. BEGIN SKIP LINE	470'
W.B. END SKIP LINE / BEGIN SOLID LINE	500'

TRAFFIC CONCEPTS, INC.
325 Gambrills Road
Suite B
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(410) 923-7101
FAX: (410) 923-6473
EMAIL: TRAFFIC@TRAFFIC-CONCEPTS.COM

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION
**MD 924 (EMMORTON RD.) AND
ABINGDON RD./SINGER RD.**
ABINGDON, MARYLAND

GENERAL INFORMATION PLAN			
SCALE	NONE	DATE	11-29-2012
CONTRACT NO.	BW989M82		
DESIGNED BY	T. ZAYDEL	COUNTY	HARFORD
DRAWN BY	T. ZAYDEL	LOGMILE	12082401.01
CHECKED BY	K. SCHMID	T.I.M.S. NO.	L364
F.A.P. NO.	NA	TOD NO.	
DRAWING NO.	TS 1904K-GI	SHEET NO.	2 OF 2